

## AMENDMENTS

### In the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

### Listing of Claims

1. – 18. (Canceled)

19. ( currently amended ) A metal structure, comprising:

a semiconductor substrate with a conductor thereon;

an insulating layer overlying the semiconductor substrate having a hole therein exposing the conductor;

a conductive plug substantially filling the hole and electrically connecting the underlying conductor;

a ~~silicon-carbon-containing film~~ carbon-doped silicon oxide or carbon and nitrogen-doped silicon oxide, serving as an etching stop layer, overlying the insulating layer and the conductive plug;

a low dielectric constant layer overlying the ~~silicon-carbon-containing film~~ carbon-doped silicon oxide or carbon and nitrogen-doped silicon oxide;

a trench in the low dielectric constant layer and the ~~silicon-carbon-containing film~~ carbon-doped silicon oxide or carbon and nitrogen-doped silicon oxide; and

a copper or copper alloy conductor substantially filling the trench, electrically connecting the conductive plug.

20. ( original ) The structure as claimed in claim 19, wherein the conductive plug comprises tungsten.
21. ( original ) The structure as claimed in claim 19, wherein the conductor comprises metal silicide.
22. ( original ) The structure as claimed in claim 19, wherein the semiconductor substrate comprises silicon germanium.
23. ( original ) The structure as claimed in claim 19, wherein the conductor is composed of doped semiconductor, polysilicon, metal, metal compound or a combination thereof.
24. ( original ) The structure as claimed in claim 19, wherein the insulating layer comprises undoped silicate glass (USG).
25. ( currently amended ) The structure as claimed in claim 19, wherein the thickness of the ~~silicon-carbon-containing film~~ carbon-doped silicon oxide or carbon and nitrogen-doped silicon oxide is less than 500 Å.
26. ( canceled )
27. ( currently amended ) The structure as claimed in claim 19, wherein the carbon content of the ~~silicon-carbon-containing film~~ carbon-doped silicon oxide or carbon and nitrogen-doped silicon oxide exceeds 20%.

28. ( original ) The structure as claimed in claim 19, wherein the dielectric constant (k) of the low dielectric constant layer is less than 3.0.
29. ( original ) The structure as claimed in claim 19, wherein the low dielectric constant layer is formed by chemical vapor deposition (CVD) and/or Spin-On method.
30. ( original ) The structure as claimed in claim 19, wherein the low dielectric constant layer comprises inorganic film and/or organic film.
31. ( currently amended ) The structure as claimed in claim 19, wherein ~~the width of the hole is~~ having a width of less than 950Å.
32. ( currently amended ) The structure as claimed in claim 19, wherein ~~the width of the trench~~ is having a width of less than 1300Å.
33. ( currently amended ) The structure as claimed in claim 19, wherein the ~~lining layer~~ structure further comprises a Ta and/or TaN lining layer.
34. ( currently amended ) A metal structure, comprising:
- a semiconductor substrate with a conductor comprising nickel silicide thereon;
  - an insulating layer overlying the semiconductor substrate having a hole therein exposing the conductor;
  - a conductive plug substantially filling the hole and electrically connecting the underlying conductor;

a ~~silicon carbon-containing film~~ carbon-doped silicon oxide or carbon and nitrogen-doped silicon oxide, serving as an etching stop layer, overlying the insulating layer and the conductive plug;

a low dielectric constant layer overlying the ~~silicon carbon-containing film~~ carbon-doped silicon oxide or carbon and nitrogen-doped silicon oxide;

a trench in the low dielectric constant layer and the ~~silicon carbon-containing film~~ carbon-doped silicon oxide or carbon and nitrogen-doped silicon oxide; and

a copper or copper alloy conductor substantially filling the trench, electrically connecting the conductive plug.

35. ( original ) The structure as claimed in claim 34, wherein the conductive plug comprises tungsten.

36. ( currently amended ) The structure as claimed in claim 34, wherein the thickness of the ~~silicon carbon-containing film~~ carbon-doped silicon oxide or carbon and nitrogen-doped silicon oxide is less than 500 Å.

37. ( currently amended ) The structure as claimed in claim 34, wherein the carbon content of the ~~silicon carbon-containing film~~ carbon-doped silicon oxide or carbon and nitrogen-doped silicon oxide exceeds 20%.

38. ( original ) The structure as claimed in claim 34, wherein the dielectric constant (k) of the low dielectric constant layer is less than 3.0.

39. ( currently amended ) The structure as claimed in claim 34, wherein ~~the width of~~ the hole is having a width of less than 950Å.

40. ( currently amended ) The structure as claimed in claim 34, wherein ~~the width of~~ the trench is having a width of less than 1300Å.

41. (original) The structure as claimed in claim 34, wherein the lining layer comprises Ta and/or TaN.